much for the acquisition of geographical information. In respect to the great water system of Africa, in its connection with the mystery of the Nile and the mystery of the Congo, he has solved an enigma that has attracted the attention of the world for ages, and fixed his name in the foremost rank of geographers, explorers and travelers.—*Condensed from the New York Tribune.*

MICROSCOPY.[1]

MICROSCOPICAL SECTION, TROY SCIENTIFIC ASSOCIATION.—A regular meeting of this section was held on the evening of April 1st, Dr. R. H. Ward, chairman of the section, in the chair.

Minutes of the last regular meeting and record of the subsequent soirée were read and approved.

Dr. Ward announced an invitation from the microscopists of Indianapolis to their fellow-workers throughout the country, to attend a *National Congress of Microscopists* in that city, commencing on Wednesday the 14th of August next, and adjourning in time for members to attend the meeting of the American Association at St. Louis, one week later. The biological section of the Indianapolis Lyceum of Natural History, assisted by many influential citizens, will make ample arrangements for the comfort and economy of visitors from abroad, both in obtaining reduced rates of travel and in the most liberal entertainment while in the city. A detailed statement of the proposed work of the congress and of the facilities offered by the local management will be given to the public, within a few weeks, in the form of a circular. The committee of arrangements, consisting of Prof. E. T. Cox, chairman, Mr. E. Sharpe, Dr. Henry Jameson and Dr. W. W. Butterfield, secretary, have received the individual endorsement and promise of coöperation of leading microscopists, and now formally extend an invitation to the microscopical societies and workers throughout the country, with the assurance of a successful meeting. Such a congress, with its opportunities for stimulating microscopical work, discussing questions of general importance, and cultivating personal acquaintance among fellow-workers in the science, has been under consideration for some time, and the present year is believed to be an unusually favorable opportunity for the meeting, on account of the facility with which scientists from the eastern and southern sections can visit Indianapolis on their way to St. Louis, with no additional expense and no delay save the time spent at the congress. Microscopists desiring to attend should apply to the secretary of the committee for circulars giving further information, and should send notice of any important business to be offered for consideration, and titles of papers proposed to be read, accompanied by a copy of the papers or by abstracts of the same, to the secretary of the committee at

[1] This department is edited by Dr. R. H. WARD, Troy, N. Y.

least two weeks before the time of the meeting, in order that a correct programme may be prepared.

The invitation to the congress at Indianapolis was, on motion, accepted, and it was resolved that members finding themselves able to attend should give early notice to that effect to the secretary of the committee, at No. 413 N. East street, Indianapolis.

Mr. Joseph McKay gave a demonstration of Prof. H. L. Smith's method of dry mounting by means of a background of wax and a curtain-ring cell, showing the facility and elegance with which this method may be carried out.

Rev. A. B. Hervey described a *New Method of Fluid Mounting* which he had recently devised. In his study of the algæ and lichens he had been troubled, as others have been, by the difficulty of permanently mounting specimens while studying them, without waste of time or change of arrangements. Most of the methods of mounting either ruin such objects entirely or else require considerable time, care, and special appliances that are troublesome to a busy student; and therefore instructive specimens are often neglected and lost. The objects may be transferred from water to Farrant's solution of gum and glycerine and mounted without delay, but the structure is not well preserved and air bubbles are likely to be obstinately present. The objects show best in distilled water, sea water, camphor water, etc.; and to mount them instantly and with uniform success he prepares cells of the gum and glycerine solution put on by means of the turn table in the usual way. Having made cells of the required depth, and laid them aside until thoroughly dry, the inner half of the width of the cell is varnished on the turn table with gold size, which is also allowed time to dry perfectly. Objects in water are arranged and covered in these cells with ease, and are ready after lying aside for a time varying from a few minutes to a few hours, to receive a coat of gold size or other varnish, the fluid that exudes from the cell in pressing down the cover glass having dissolved enough of the gum cell to hold the cover in position. It has not been found that the cell is too much affected by the fluid; but if it should be so the cell could be made of the usual cements, insoluble in water, and then coated with a thin layer of gum.

Mr. C. E. Hanaman demonstrated the use of the Nachét camera lucida, and quoted opinions from discussions at the Queckett Club to confirm its superior facility of use as compared with the other forms of camera.

Dr. Ward presented the *New Self-centering Turn-table* recently contrived by W. H. Bulloch, of Chicago, and remarked that this table seemed to combine all the really radical improvements that have been made in the turn-table up to the present time. The early tables were more or less satisfactory varieties of the original Shadbolt form, and were arranged to be whirled in a variety of

ways; but the first fundamental improvement was the self-centering table of Dr. Matthews, which centered the slide for width only between jaws swinging on opposite posts and held it in place by means of a sliding wedge. This method is greatly simplified without at all impairing its efficiency, by discarding the wedge and jaws and centering by the posts alone, in the table contrived and now made by Mr. Zentmayer. Mr. Cox has undisputed priority in the expedient which now surpasses all others, and seems likely to continue to do so, of centering for both width and length by grasping the diagonally opposite corners of the slide between jaws that move automatically towards or from the center, after the manner of the different forms of American scroll chucks. In Mr. Cox's table, now well known, the jaws are moved by a horizontal screw, with right and left threads on the opposite ends, under the revolving plate. Mr. Kinne adopted independently, but published subsequently, the same principle, but moved the jaws by a lever instead of a screw. Mr. Bulloch's table is essentially a modification of the Cox table, but moves the jaws by a scroll screw on the surface of a revolving plate, precisely as is done in the scroll chucks of the machinists. The revolving table is made double, of two horizontal plates, the jaws sliding through the upper plate by means of a screw on the upper surface of the lower plate, thus securing a very steady as well as convenient and durable adjustment. In addition to this, the posts and clips are added after Mr. Zentmayer's method, by which the slide may be centered for width only. or under which it may be adjusted artificially by means of concentric rings as in the early forms of tables. The workmanship is good beyond comparison with anything of the kind except the one last mentioned; and the instrument, at its moderate price, can be commended as a real luxury to any one who desires a more elaborate form than that. It is one of the little things that are a great comfort.

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SCIENTIFIC NEWS.

— Recent arrivals at the Philadelphia Zoölogical Garden: 1 great-horned owl (*Bubo virginianus*), presented; 1 zebu (*Bos indicus*) ♀, India, born in the Garden; 1 crested anolis (*Anolis equestris*), and 1 tree boa (*Epicrates angulifer*), West Indies, presented; 2 Cashmere goats (*Capra hircus var.*) ♀, born in the Garden; 2 woodchucks (*Arctomys monax*), presented; 1 raccoon (*Procyon lotor*), presented; 1 common seal (*Phoca vitulina*) ♀, purchased; 1 macaque monkey (*Macacus nemestrinus*) ♀ India, born in the Garden; 3 alligators (*Alligator mississippiensis*), presented; 1 herring gull (*Larus argentatus*); 4 sirens (*Siren lacertina*), Southeastern U. S., presented; 2 spotted salamanders (*Salamandra maculosa*), Europe and North Africa, presented; 1 bactrian camel (*Camelus bactrianus*) ♂, Asia, born in the Garden.—*Arthur E. Brown, Genl. Supt., April* 1, 1878.